

FURTHER ON ANNECTANT BUGS.

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In this BULLETIN for October, 1925, Dr. E. Bergroth has criticized at length our paper entitled *Some Annectant Bugs*, etc., published in the number for June, 1924.

In letters from Dr. Bergroth to the writers he intimated his intent to censure the paper, but so clearly revealed the weakness of his position that we did not believe he would have the temerity to break into print on the subject.

Our censor refers to the introduction to our paper as "pompous and self-sufficient," but as it confesses to general ignorance of the units of classification, specifically denies reflecting upon individuals. grants that many errors in previous work were unavoidable, and refrains from redefining cimicoid groupings, it seems an humble rather than a pompous introduction.

If we are not to attempt to improve upon preceding work then we are not carrying on real research and may as well become intellectually stagnant and accept everything on authority. Apparently this is the type of systematic work which Dr. Bergroth wishes to foster, but we reject it absolutely. Science does not concern itself with precedents and authorities but with verification and reverification of observations.

As to the quality of our paper we have no apology to make except for typographical errors which were not corrected as indicated on proof sheets, but for which corrections were published later.

Adverting to some of the specific criticisms we may say at first that many of them are out of place, as with one exception our paper dealt only with forms we had personally examined. Notice of this is served in our key which is restricted "to the groups treated in this paper." That our characterizations do not cover forms unknown to us is no matter for surprise, nor we add, for chagrin. Despite the irrelevance of some of Dr. Bergroth's criticisms and the general "getting nowhere" cast of his paper, we will refer in detail to some of his remarks.

Whether the beak of *Idiotropus* Fieber is to be called 3- or 4-segmented merely depends upon whether the base of the beak is reckoned as a segment or as part of the head, a point we have given some attention in a paper recently published in the Pro-

ceedings of the Biological Society of Washington (Vol. 38, pp. 145-148. 1925). When this part of the beak is long authors have counted it as a segment, when short it usually has been ignored. Unless one makes allowance for this usage, previous definitions of Microphysidae and allies cannot be understood. The beaks in all are fundamentally alike but for purposes of classification have arbitrarily been treated as 4- or 3-segmented according to whether the basal attachment was segment-like or not.

We trust Dr. Bergroth sees the implication of this feature which he has dwelt upon so unnecessarily as to the close relationships of microphysids and anthocorids. If they are fundamentally alike in structure of the beak, and if the number of tarsal segments is a character of little importance as Dr. Bergroth avers later in his critique (a view with which we wholly agree), what becomes of the family ranking of these groups? None of the principal characters advanced by Reuter remains except venational ones, and these, like the others, certainly intergrade. A glance at the figures on Plates XVI and XVII of Douglas and Scott, *The British Hemiptera*, should convince anyone that venation in these segregates can hardly do otherwise than intergrade. What is more important the course of veins in the membrane is hardly a character to use for family distinctions of insects among which brachyptery is so frequent.

Dr. Bergroth's unreasoned assumptions as to our ignorance of existing literature on Hemiptera are puerile. We do not believe in going into great detail in this respect, laboriously endeavoring to exhibit erudition, but we credit the readers we are addressing with a general understanding of the matter in hand. If Dr. Bergroth had maintained a like attitude when reading our paper he would have found little to criticize.

His animadversions on the structure of the beak bring us no news, and they certainly cannot be construed as a defense of separation of microphysids from anthocorids. We agree as to the unimportance of the number of tarsal segments, thought we were expressing that attitude in the paper criticized, and plainly showed such a view in our paper on Ploiariinae (*Proc. U. S. Nat. Mus.*, 67, 1925, Art. 1) where insects with 1-, 2-, and 3-segmented tarsi were grouped in a single subfamily. Again this evidence is of no comfort to those who would separate microphysids from anthocorids.

Despite the doctor's fears as to the lack of enlightenment in Washington, we are acquainted with Reuter's Monographia Anthocoridarum and we agree with the disposition there of the groups Anthocorina, Termatophylina, and Microphysina, as subfamilies, not with their more modern elevation to families. (Cf. Poppius, Acta. Soc. Sci. Fennicae, 1909, et al.)

The name *Microphysa tenella* at which Dr. Bergroth stares his eyes out (to use his own expression) occurs in our paper only in the explanation of the plate, where some figures are given for comparative purposes. They serve to illustrate certain characters of the microphysids, and would have answered equally well without generic and specific assignment. The species is not new as Dr. Bergroth fears, but is the European *Myrmedobia tenella*. If our name for it has pained anyone we can only say that was not our intention.

On page 160 our censor says, "the genus *Idiotropus* McA. Mall. (nec. Fieb.) has all the characters of the family Microphysidae as given by Reuter in his monograph, apart from the rostrum which is three-segmented as in another Microphysid genus (*Nabidomorpha* Popp.)." Aside from the facts that Reuter defined a subfamily, not a family, in his Monograph, and that all Heteroptera, according to Bergroth's own statement on the previous page, have four-segmented beaks, this is a perfectly good statement, but the exceptions are so large a proportion of the whole, that it is merely inane.

The dimorphism of the sexes in this group is correlated with the development of the wings. Fully winged specimens resemble in form ordinary anthocorids, capsids, or the like, while brachypterous specimens are more or less racquet-like in outline as seen from above. This is true regardless of sex as racquet-shaped males are characteristic of the annectant genus *Coccivora* we have recently described.¹ In view of these considerations—inevitable agreement in structure of beak, and correlation of body form with brachyptery, it seems there is no need for the new name *Mallochiola* Bergroth.

The chief defect in our treatment of the Isometopinae according to Bergroth apparently is that "it is impossible to know from the descriptions in what groups of the family these genera should be placed in the systematic arrangement outlined by me (Not.

¹ Proc. Biol. Soc. Wash., vol. 38, pp. 145-148, 1925.

Ent., IV, pp. 4-5)." It is indeed grievous that such bland ingenuousness should be disappointed. We will remedy the matter now by stating that *Lidopus*, *Alcecoris*, and *Wetmorea* all have the clavus broad posteriorly, but must add that this basis for a primary division of the Isometopinae is not to be especially praised, for if brachyptery occurs in the group as it is known to do in most families of Heteroptera, the form of the clavus in insects exhibiting it will scarcely be a reliable clew to their relationships.

Now as to *Peritropis*, the fact that it has only 2-segmented tarsi was overlooked not only by Poppius, and Reuter, but so far as we have seen by every other author who has published on the group. We made no argument whatever for the importance of the character so the doctor's extended remarks on this subject are uncalled for. We said the allocation of *Peritropis* in the classification could not have been well considered—a simple truism, for how could it have been given proper consideration when some of its characters had not even been noticed? Moreover, the definition (Der Miriden, 1910) of the family Miridae by Reuter, its most profound student, provides for no exceptions to the 3-segmented condition of the tarsi. The point, therefore, was worth mentioning, but that is all; it should not have inspired heckling.

Dr. Bergroth's views as to the unimportance in classification of the number of rostral and tarsal segments cannot be stronger than ours and our paper which he so thoroughly lambasts was intended to show that such characters have been given too much importance in taxonomy, and we described the annectant forms to illustrate the point. If our critic had not been blinded by animus he would have been able to see this, and would, we hope, have refrained from wasting, and causing us to waste in reply, many printed pages that could much better be devoted to constructive articles.

The cause of the doctor's peevishness with us is no doubt our placing his name *Teratodia emoritura* gen. et sp. nov. as a synonym of his *Diphleps unica* gen. et sp. nov. which had page precedence (Not. Ent., IV, 1924, pp. 5-7). We had several good specimens of this insect while Dr. Bergroth had a male in fair condition and a female that had been killed while teneral and in which the head and thorax were more or less collapsed. The "several American hemipterists" he mentions not only agreed with McAtee and Malloch after examination of the type speci-

mens, that the new genus *Diphleps* was described from a teneral specimen, but also that the so-called genus *Teratodia* was described from a male of the genotype of *Diphleps*.

In compliance with a request of Dr. Bergroth in a letter, we submitted the matter to "competent and unbiased hemipterists," but he will not abide by the result. Instead he still defends his *Teratodia* and refers to differences in the anterior angles of the pronotum, although it would seem that such a line of argument is strictly invalid because of the teneral character of one of the specimens. To describe two new genera from the sexes of the same species, and one of them from a single teneral specimen, is an almost unbelievable lapse to come from an entomologist of Dr. Bergroth's reputation.

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News of Dr. Bergroth's death reached the writers after the present article had been accepted for publication. As its *raison d'être* was the writings, not the existence of Dr. Bergroth, we see no compelling reason for withdrawing a rejoinder that could justly have been made more pointed.